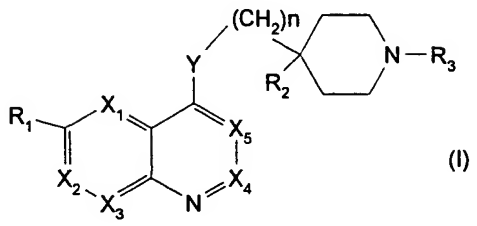
CLAIMS

1. A compound of general formula (I):



(I)

wherein:

X_1, X_2, X_3, X_4 and X_5 are >C-R'$_1$ to >C-R'$_5$, respectively, or, alternatively, not more than one of X_1, X_2, X_3, X_4, and X_5 is a nitrogen atom;

R_1, R'$_1$, R'$_2$, R'$_3$, R'$_4$, and R'$_5$ are identical or different, and each independently is:

a hydrogen or halogen atom or an alkyl, cycloalkyl, phenyl, phenylthio, mono- or bicyclic aromatic heterocyclyl or heterocyclylthio, hydroxyl, alkyloxy, trifluoromethoxy, alkylthio, trifluoromethylthio, cycloalkyloxy, cycloalkylthio, cyano, carboxyl, alkyloxycarbonyl, cycloalkyloxycarbonyl, -NRaRb or -CONRaRb radical (for which Ra and Rb are hydrogen, alkyl, cycloalkyl, phenyl, mono- or bicyclic aromatic heterocyclyl, or Ra and Rb form, together with the nitrogen atom to which they are attached, a 5- or 6-membered heterocycle which can optionally contain another heteroatom chosen from O, S and N and, where appropriate, bearing an alkyl, phenyl or mono- or bicyclic aromatic heterocyclyl substituent on the nitrogen atom or, where

appropriate, the sulfur atom of which is oxidized in the form of sulfinyl or sulfonyl), or represent a methylene radical substituted with fluoro, hydroxyl, alkyloxy, alkylthio, cycloalkyloxy, cycloalkylthio, phenyl, mono- or bicyclic aromatic heterocyclyl, carboxyl, alkyloxycarbonyl, cycloalkyloxycarbonyl, -NRaRb or -CONRaRb for which Ra and Rb are defined as above, or represent phenoxy, heterocyclyloxy, benzyloxy, heterocyclylmethyloxy, or, alternatively,

R_1 is difluoromethoxy, or a radical of structure $-C_mF_{2m+1}$, $-SC_mF_{2m+1}$, or $-OC_mF_{2m+1}$ wherein m is an integer from 1 to 6; or alternatively,

R'_5 is trifluoroacetyl;

R_2 is:

carboxyl, alkyloxycarbonyl, cycloalkyloxycarbonyl, cyano, -CONRaRb, wherein

Ra and Rb are, respectively, hydrogen, alkyl, cycloalkyl, phenyl, mono- or bicyclic aromatic heterocyclyl, or

Ra or Rb each is hydroxyl, alkyloxy, cycloalkyloxy, or

Ra and Rb form, together with the nitrogen atom to which they are attached, a 5- or 6-membered heterocycle which can optionally contain another heteroatom chosen from O, S and N and, where appropriate, bearing an alkyl, phenyl or mono- or bicyclic aromatic heterocyclyl substituent on the

nitrogen atom or, where appropriate, the sulfur atom of which is oxidized in the form of sulfinyl or sulfonyl; or

R_2 is hydroxymethyl, alkyl containing 1 or 2 carbon atoms substituted with carboxyl, alkyloxycarbonyl, cycloalkyloxycarbonyl, cyano, or -CONRaRb, wherein Ra and Rb are defined as above; or

R_2 is $-CF_2-Rc$, $-C(CH_3)_2-Rc$, -CO-Rc, -CHOH-Rc, -C(cycloalkyl)-Rc, or -CH=CH-Rc, wherein

Rc is carboxyl, alkyloxycarbonyl, cycloalkyloxy-carbonyl, or -CONRaRb wherein Ra and Rb are defined as above;

R_3 is a phenyl, mono- or bicyclic aromatic heterocyclyl or alk-$R°_3$ radical, wherein

alk is an alkyl radical, and

$R°_3$ is hydrogen, halogen, hydroxyl, alkyloxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, dialkylamino, cycloalkyl, cycloalkyloxy, cycloalkylthio, cycloalkylsulfinyl, cycloalkylsulfonyl, cycloalkylamino, N-cycloalkyl-N-alkylamino, $-N-(cycloalkyl)_2$, acyl, cycloalkylcarbonyl, phenyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, phenylamino, N-alkyl-N-phenylamino, N-cycloalkyl-N-phenylamino, $-N-(phenyl)_2$, phenylalkyloxy, phenylalkylthio, phenylalkylsulfinyl, phenylalkylsulfonyl, phenylalkylamino, N-alkyl-N-phenylaminoalkyl,

N-cycloalkyl-N-phenylalkylamino, benzoyl, mono- or bicyclic aromatic heterocyclyl, heterocyclyloxy, heterocyclylthio, heterocyclylsulfinyl, heterocyclylsulfonyl, heterocyclylamino, N-alkyl-N-heterocyclylamino, N-cycloalkyl-N-heterocyclylamino, heterocyclylcarbonyl, heterocyclylalkyloxy, heterocyclylalkylthio, heterocyclylalkylsulfinyl, heterocyclylalkylsulfonyl, heterocyclylalkylamino, N-alkyl-N-heterocyclylaminoalkyl, N-cycloalkyl-N-heterocyclylaminoalkyl,carboxyl, alkyloxycarbonyl, -NRaRb, or -CO-NRaRb, wherein Ra and Rb are defined as above in the definition of R_2 and wherein any heterocyclyl mentioned above is mono- or bicyclic aromatic; or alternatively

R°_3 is -CR'b=CR'c-R'a, wherein

R'a is phenyl, phenylalkyl, heterocyclyl, or heterocyclylalkyl, phenoxyalkyl, phenylthioalkyl, phenylsulfinylalkyl, phenylsulfonylalkyl, phenylaminoalkyl, N-alkyl-N-phenylaminoalkyl, heterocyclyloxyalkyl, heterocyclylthioalkyl, heterocyclylsulfinylalkyl, heterocyclyl-sulfonylalkyl, heterocyclylaminoalkyl, N-alkyl-N-heterocyclylaminoalkyl, heterocyclylthio, heterocyclylsulfinyl, heterocyclylsulfonyl, phenylthio, phenylsulfinyl, or phenylsulfonyl,

wherein any heterocyclyl mentioned above is

mono- or bicyclic aromatic, and

R'b and R'c are hydrogen, alkyl or cycloalkyl; or alternatively

$R°_3$ is a radical -C≡C-Rd wherein

Rd is alkyl, phenyl, phenylalkyl, phenoxyalkyl, phenylthioalkyl, N-alkyl-N-phenylaminoalkyl, heterocyclyl, heterocyclylalkyl, heterocyclyloxyalkyl, heterocyclylthioalkyl, heterocyclylaminoalkyl, N-alkyl-N-heterocyclylaminoalkyl, wherein

any heterocyclyl mentioned above is mono- or bicyclic aromatic; or alternatively

$R°_3$ is a $-CF_2$-phenyl, or mono- or bicyclic aromatic $-CF_2$-heterocyclyl radical,

Y is a radical >CH-Re, wherein

Re is hydrogen, fluoro, hydroxyl, alkyloxy, cycloalkyloxy, carboxyl, alkyloxycarbonyl, cycloalkyloxycarbonyl, -NRaRb or -CO-NRaRb, wherein Ra and Rb are defined as above for R_2, or one is a hydrogen atom and the other is an alkyloxycarbonyl, acyl, cycloalkylcarbonyl, benzoyl or heterocyclylcarbonyl radical, wherein

any heterocyclyl portion is mono- or bicyclic aromatic;

or alternatively

Y is a difluoromethylene, carbonyl, hydroxyimino-methylene, alkyloxyiminomethylene, or cycloalkyloxyimino-

methylene radical, or a 1,1-cycloalkylene radical containing 3 to 6 carbon atoms; and

n is an integer from 0 to 4;

wherein any phenyl, benzyl, benzoyl or heterocyclyl radical or portion mentioned above are unsubstituted, or substituted on the ring with 1 to 4 substituents independently chosen from halogen, hydroxyl, alkyl, alkyloxy, alkyloxyalkyl, haloalkyl, trifluoromethyl, trifluoromethoxy, trifluoromethylthio, carboxyl, alkyloxycarbonyl, cyano, alkylamino, -NRaRb wherein Ra and Rb are defined as above, phenyl, hydroxyalkyl, alkylthioalkyl, alkylsulfinylalkyl and alkylsulfonylalkyl,

wherein any alkyl or acyl radical or portion, unless otherwise indicated, comprises from 1 to 10 carbon atoms in a straight or branched chain, and any cycloalkyl radical comprises from 3 to 6 carbon atoms;

in any enantiomeric or diastereoisomeric form, in any syn or anti form, or any salt thereof, or mixture of any of the foregoing in any ratio.

2. A compound as claimed in claim 1, wherein X_1, X_2, X_3, X_4, and X_5 are, respectively, >C-R'_1 to >C-R'_5, or alternatively not more than one of them is a nitrogen atom;

R_1, R'_1, R'_2, R'_3, R'_4 and R'_5 are identical or different, and each is:

a hydrogen or halogen atom or an alkyl or alkyloxy radical, or is a methylene radical substituted with alkyloxy;

R_2 is carboxyl, alkyloxycarbonyl or -CONRaRb, wherein Ra is a hydrogen atom and Rb is a hydrogen atom or a hydroxyl radical; or

R_2 is hydroxymethyl, alkyl containing 1 or 2 carbon atoms substituted with carboxyl, or alkyloxycarbonyl;

R_3 is a radical alk-$R°_3$ wherein

alk is an alkyl radical, and

$R°_3$ is hydrogen, cycloalkyl, cycloalkylthio, phenyl, phenoxy, phenylthio, phenylamino, heterocyclyloxy or heterocyclylthio, or alternatively

$R°_3$ is -CR'b=CR'c-R'a wherein R'a is phenyl, and wherein R'b and R'c are hydrogen;

Y is a radical >CH-Re, wherein

Re is hydrogen, fluoro, or hydroxyl;

n is an integer from 2 to 3;

wherein any phenyl or heterocyclyl radical or portion is unsubtituted, or is substituted on the ring with from 1 to 4 halogens, and

wherein any alkyl or acyl radical or portion, unless otherwise indicated, comprises from 1 to 10 carbon atoms in a straight or branched chain, and any cycloalkyl radical comprises from 3 to 6 carbon atoms;

in any enantiomeric or diastereoisomeric form, in any syn or anti form, or any salt thereof, or mixture of any of the foregoing in any ratio.

3. 4-[3-(3-chloro-6-methoxyquinolin-4-yl)propyl]-1-[2-(thien-2-yl)thioethyl]piperidine-4-carboxylic acid, or any salt thereof.

4. 4-[3-(3-chloro-6-methoxyquinolin-4-yl)propyl]-1-[2-(3,5-difluorophenoxy)ethyl]piperidine-4-carboxylic acid, or any salt thereof.

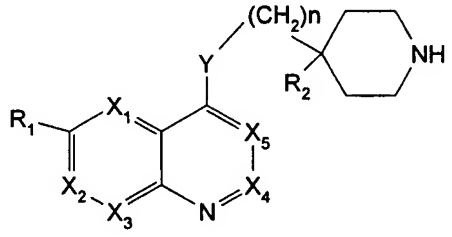
5. 4-[3-(3-chloro-6-methoxyquinolin-4-yl)propyl]-1-(2-thiazol-2-thioethyl)piperidine-4-carboxylic acid, or any salt thereof.

6. 1-(2-cyclopentylthioethyl)-4-[3-(3-fluoro-6-methoxyquinolin-4-yl)propyl]piperidine-4-carboxylic acid, or any salt thereof.

7. 4-[3-(3-fluoro-6-methoxyquinolin-4-yl)propyl]-1-(3-phenylallyl)piperidine-4-carboxylic acid, or any salt thereof.

8. A process for preparing a compound as claimed in claim 1, comprising:

coupling a chain R_3 as defined in claim 1 with a compound of general formula (II):



(II)

wherein X_1, X_2, X_3, X_4, X_5, R_1, R_2, Y and n are as defined in claim 1;

optionally protecting R_2 when R_2 comprises a carboxyl or

amino radical;

optionally removing said protection from R_2;

optionally separating any enantiomeric or diastereoisomeric form, any syn or anti form, or any salt thereof; and

optionally converting a product obtained into a salt thereof.

9. A process as claimed in claim 8, wherein said coupling of a chain R_3 with a compound of general formula (II) occurs with a compound of general formula:

$$R_3\text{-}X$$

wherein R_3 is defined as above, and

X is a halogen atom, a methylsulfonyl radical, a trifluoromethylsulfonyl radical, or a p-toluenesulfonyl radical.

10. A process as claimed in claim 8, wherein

R_3 is a radical -alk-$R°_3$, wherein

alk is an alkyl radical, and

$R°_3$ is a radical -C≡C-Rd, wherein

Rd is phenyl, phenylalkyl, heterocyclyl or mono- or bicyclic aromatic heterocyclylalkyl;

comprising:

coupling an alkynyl halide, HC≡C-alk-X, wherein

alk is defined as above, and

X is a halogen atom; and

substituting the chain with a phenyl, phenylalkyl, heterocyclyl or heterocyclylalkyl radical.

11. A process as claimed in claim 9, wherein

R_3 is a radical -alk-$R°_3$, wherein

alk is an alkyl radical, and

$R°_3$ is a radical -C≡C-Rd, wherein

Rd is phenyl, phenylalkyl, heterocyclyl or mono- or bicyclic aromatic heterocyclylalkyl;

comprising:

coupling an alkynyl halide, HC≡C-alk-X, wherein

alk is defined as above, and

X is a halogen atom; and

substituting the chain with a phenyl, phenylalkyl, heterocyclyl or heterocyclylalkyl radical.

12. A process as claimed in claim 8, wherein:

R_3 is a radical -alk-$R°_3$, wherein

alk is an alkyl radical, and

$R°_3$ is a phenoxy, phenylthio, phenylamino, heterocyclyloxy, heterocyclylthio or heterocyclylamino radical in which the heterocyclyl portion is aromatic;

comprising constructing the chain stepwise by:

condensing a chain HO-alk-X wherein

X is a halogen atom;

obtaining a hydroxyalkyl chain;

converting the hydroxyalkyl chain into a haloalkyl, methanesulfonylalkyl, or p-toluenesulfonylalkyl chain by known methods; and

reacting the chain in basic medium with an aromatic

derivative of structure Ar-ZH, wherein

Ar is a phenyl or aromatic heterocyclyl radical, and

Z is a sulfur, oxygen, or nitrogen atom.

13. A process as claimed in claim 9, wherein:

R_3 is a radical -alk-$R°_3$, wherein

alk is an alkyl radical, and

$R°_3$ is a phenoxy, phenylthio, phenylamino, heterocyclyloxy, heterocyclylthio or heterocyclylamino radical in which the heterocyclyl portion is aromatic,

comprising constructing the chain stepwise by:

condensing a chain HO-alk-X wherein

X is a halogen atom;

obtaining a hydroxyalkyl chain;

converting the hydroxyalkyl chain into a haloalkyl, methanesulfonylalkyl, or p-toluenesulfonylalkyl chain by known methods; and

reacting the chain in basic medium with an aromatic derivative of structure Ar-ZH, wherein

Ar is a phenyl or aromatic heterocyclyl radical, and

Z is a sulfur, oxygen, or nitrogen atom.

14. A pharmaceutical composition, comprising at least one compound according to claim 1, alone, or in combination with one or more pharmaceutically acceptable adjuvants or diluents.

15. A pharmaceutical composition, comprising at least one compound according to claim 3, alone, or in combination

with one or more pharmaceutically acceptable adjuvants or diluents.

16. A pharmaceutical composition, comprising at least one compound according to claim 4, alone, or in combination with one or more pharmaceutically acceptable adjuvants or diluents.

17. A pharmaceutical composition, comprising at least one compound according to claim 5, alone, or in combination with one or more pharmaceutically acceptable adjuvants or diluents.

18. A pharmaceutical composition, comprising at least one compound according to claim 6, alone, or in combination with one or more pharmaceutically acceptable adjuvants or diluents.

19. A pharmaceutical composition, comprising at least one compound according to claim 7, alone, or in combination with one or more pharmaceutically acceptable adjuvants or diluents.